

Certificate of Analysis

Product name	Protocatechuic acid	Batch Quantity	250 kgs
Plant Source	Acorus gramineus Soland	Manufacture Date	Dec .06, 2019
Batch Number	PRK191206	Certificate Date	Dec .06, 2019
CAs No.	99-50-3	Expiration Date	Dec .06, 2021

Item	Specification	Test result
Assay	≥ 99 %(Neutralization titration) (on dry basis)	99.9%
Chemical & physical control		
Appearance	White to light brown crystalline powder	Conform
Solubility	Soluble in hot water, ethanol and ether, slightly soluble in cold water, insoluble in benzene.	Conform
Melting point	199°C - 203°C	200 °C
Odor	Characteristic	Conform
Particle size	80Mesh	Conform
Solvent residual	N.M.T. 1%	0.60%
Loss on drying	N.M.T. 5%	2.00%
Ash	N.M.T. 5%	3.10%
Pest residual	N.M.T. 10 PPB	Absence
Heavy metal		
Total heavy metals (sum of As, Cd, Pb and Hg)	ICP/MS USP <730>/AOAC 993.14	≤10 ppm
Arsenic	ICP/MS USP <730>/AOAC 993.14	≤2 ppm
Cadmium	ICP/MS USP <730>/AOAC 993.14	≤1 ppm
Lead	ICP/MS USP <730>/AOAC 993.14	≤2 ppm
Mercury	ICP/MS USP <730>/AOAC 993.14	Informative , test annually or every 5 lots (ppm)
Microbiological control		
Total plate count	N.M.T. 1000 CFU/GM	68 CFU/GM
Yeast & mold	N.M.T. 100 CFU/GM	11 CFU/GM
Salmonella	Absence	Conform
E.coli.	Absence	Conform
Conclusion	the product is complied with the standard.	